

Minutes of a Working Group on Barley

Ad hoc meeting, 20 June 2004, Brno, Czech Republic
H. Knüpffer, *compiler*

ECP/GR Barley Working Group Meeting 2004

Held in conjunction with the 9th International Barley Genetics Symposium, Brno, 20 June 2004

Minutes by H. Knüpffer – Final version, 23 October 2004

Agenda

Time	Topic	Speaker
12:00	Welcome, introduction, adoption of agenda, reporting	H. Knüpffer
12:05	Brief report Barley Working Group Meeting, Yerevan, July 2003	H. Knüpffer
12:20	Cereals Network matters (Coordinating committee, agreement on Barley WG representatives, confirmation of chairpersons, budget)	H. Knüpffer
12:30	Finalising priorities & recommendations of the Barley WG for EPC/GR Phase VII	H. Knüpffer
12:50	Utilization of characterization and evaluation data at the national and European level	D. Murariu (intro)
13:10	Other matters	
13:30	End of meeting	

Introduction

The *ad hoc* meeting was organised in conjunction with the 9th International Barley Genetics Symposium (IBGS) in Brno, Czech Republic (20-26 June 2004), on Sunday 20 June. Financial support from ECP/GR allowed a few members to participate in addition to those registered for the IBGS. H. Knüpffer, chairman of the ECP/GR Barley Working Group (BWG), had organised the meeting on request of the Group (cf. Report of the 2003 meeting) in cooperation with the secretariat of the IBGS. BWG matters of interest for the wider audience were discussed in the following Workshop on Barley GR:

- Barley Core Collection,
- International information system on barley genetic resources,
- Pre-breeding and base-broadening.

The agenda was adopted by the participants. It was agreed that no formal report would be produced, since the main results of the meeting would be reflected in the Priorities and Recommendations of the report of the 2003 meeting. The informal minutes would be uploaded on the ECP/GR Barley WG home page and included as appendix in the report of the 2003 meeting.

Brief report, Barley WG Meeting, Yerevan, July 2003

The participants were briefly informed about the previous meeting held during the first meeting of the Cereals Network, based on the available draft report.

Cereals Network matters¹

The composition of the Cereals Network Coordinating Group (NCG) and the budget of the Network were briefly presented by H. Knüpffer. The NCG consists of seven members representing the working groups on *Avena*, barley and wheat, as well as the ad hoc initiatives on *Triticale* and rye. The Barley WG is represented by H. Knüpffer (co-chairing the NCG together with A. Le Blanc) and M. Jalli (vice-chair of the Barley WG). The composition of the NCG and the budget were agreed upon during spring 2004, mainly via e-mail and phone contacts. The budget was finalised in June 2004². It was agreed that the Barley WG would be considered as having lower priority during the present Phase VII of ECP/GR, compared to

¹ For full information see "ECP/GR Phase VII (2004-2008). Proposal for Networks' budget allocation. Submitted by the ECP/GR Secretariat to the Steering Committee. 27 September 2004".

² Some additions were made in September 2004.

Avena and Wheat. Thus, activities on barley can be financed by a separate ECP/GR budget line, providing small funds for lower priority WGs. An *ad hoc* meeting of the database managers of the European Barley Database (EBDB) and of NGB with EURISCO and SINGER developers at IPGRI or ICARDA is planned to discuss linking of the respective databases into a worldwide information network on barley genetic resources. The WGs on Barley and *Avena* were able to hold small meetings in conjunction with international symposia in June and July 2004, respectively, at relatively low cost for ECP/GR. The second full meeting of the Cereals Network will be held for five working days, including three full-day meetings of the *Avena*, Barley and Wheat WGs on subsequent days, followed by a two-day plenary meeting, during which parallel brainstorming sessions on various crosscutting issues can be held. The information on the NCG composition and the Network budget was circulated among the BWG. The members present at the meeting agreed with the NCG and the budget.

Priorities and Recommendations of the Barley WG during ECP/GR Phase VII

The group was requested to finalise the priorities and recommendations for Phase VII as drafted in Yerevan in July 2003. With respect to the priority areas for Phase VII defined by the ECP/GR Steering Committee in October 2003, the Working Group recommended the following:

1. Characterization and evaluation (including use of modern technologies)

- Complete the International Barley Core Collection by an Ethiopian/Eritrean subset and a subset on genetic stocks; further develop BCC documentation; study the BCC using molecular markers.

Research is being carried out to create the Ethiopian/Eritrean BCC subset (Ethiopian PhD student under supervision of A. Björnstad, Norway), and the candidate accessions for the Genetic Stocks subset were selected and initially multiplied by J. Franckowiak (Fargo, ND, USA) and U. Lundqvist (Svalöv, Sweden) (reported at the Barley Genetic Resources Workshop in Brno, 20 June 2004).

- Set up an ECP/GR task force of barley breeders and scientists with an interest in pre-breeding and base-broadening, and develop regional cooperation in this issue in collaboration with FAO.

This group of scientists and breeders was formed under the coordination of Marja Jalli (Finland) during the Barley Genetic Resources Workshop in Brno, 20 June 2004. The group will prepare a background paper together with FAO as a basis for possible funding of pre-breeding activities.

- Continue the ring test on barley net blotch (under the coordination of Marja Jalli, Finland) that started as an activity of the Barley WG in the Barley WG meeting in Salsomaggiore in 2000. The main objective is to test the behaviour of net blotch resistant breeding material under different environments.

2. Task sharing

- Identification of duplicates and designation of “primary collection holders”, as a concerted action in harmony with other groups of the Cereals network. Methodology and database-supported procedures will be developed in a pilot study of the Documentation and Information Network (AEGIS project approved by the ECP/GR Steering Committee in October 2003 and started mid-2004). The Barley WG will adopt and implement the results from AEGIS.
- Set up a system for safety-duplication. To be developed for all cereals within the Cereals Network, in cooperation with the ECP/GR Documentation and Information Network).

3. *In situ* and on-farm conservation

- The Barley Working Group stressed the importance of facilitating the conservation of wild relatives and encourages an on-farm task force. Prepare a list of wild *Hordeum* spp. occurring in the ECP/GR mandate region, identify species and areas in need of protection, in cooperation with the EU project PGR Forum and the ECP/GR *In situ* Task Force.

4. Documentation and information

- Further develop the European Barley Database at IPK, transfer it to Oracle, develop new and user-friendly search interfaces. The Barley Working Group is very keen to ensure that the development of EBDB is guaranteed in the future.
- Develop updating mechanisms based on retrieving barley data from EURISCO instead of, or in addition to, requesting new updates from data providers (contributing genebanks). The mutual access procedures between EURISCO and central crop databases need to be clarified.
- Seek cooperation and integration between the EBDB and other international databases and information networks on barley genetic resources (such as SINGER, Global Barley Genetic Resources Inventory, GRIN) and the Database on Barley Genes and Genetic Stocks (BGS).

A short technical workshop is planned.

Utilization of characterization and evaluation data at the national and European level

The topic was introduced with a presentation by Danela Murariu (Romania). The Suceava Genebank participated in the GENRES barley project since 1999. Besides evaluation for biotic stresses, the barley samples studied were completely analysed with the following steps:

- Establishment of a minimal descriptor list in cooperation with Romanian breeders from agricultural research institutions.
- Development of the characterization and evaluation data base with the aim to best serve the users' needs. A minimal statistical analysis programme was linked to assist genebank staff and users to select desired material easily.
- Establishment of a genetic collection of barley samples very resistant to the diseases studied, complemented with a complete morphological, agronomical, physiological and biochemical description.

The following priorities related to characterization and evaluation data were proposed:

1. Establish a ranked list of the 10-15 most important traits by a survey among European breeders;
2. Improve the molecular characterization, and the conditions for such analysis especially in countries lacking financial resources and equipment;
3. Develop new and user-friendly search interfaces to the international database to improve its accessibility;
4. Integrate the characterization/evaluation data from any study or evaluation carried out by researchers world-wide, with web-based access to the evaluated barley germplasm.

These topics were briefly discussed. H. Knüpfner noted that a European survey of priority characterisation/evaluation descriptors was already carried out 20 years ago³, which could serve as a basis for a new survey.

³ cf. Appendix VI "List of characterization/evaluation data to be registered in the EBDB" (pp. 21-22) & Appendix VII "Results of a survey on breeding information needs" (pp. 23-30) in: UNDP/IBPGR. 1986. Report of a Barley Workshop. European Cooperative Programme for the Conservation and Exchange of Crop Genetic Resources. IBPGR, Rome).

Closing

All participants also joined the following Workshop on Barley Genetic Resources.

Participants

1. Croatia: Darko Babic (representing D. Novoselovic), darko.babic@poljinoh.hr
2. Czech Republic: Jarmila Milotová, milotova@vukrom.cz
3. Finland: Marja Jalli (vice-chair), marja.jalli@boreal.fi
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5. Italy: A. Michele Stanca, michele@stanca.it
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8. Nordic Countries: Louise Bondo, louise@ngb.se
9. Romania: Danela Murariu, dmurariu@suceava.astral.ro
10. Spain: José Luis Molina Cano, joseluis.molina@irta.es

Unable to attend

Some members planned to attend the meeting, but were unable to arrive in time, due to travel arrangements or delays. BWG members who did not respond to the invitation are not included.

1. Bulgaria: Zapryanka Popova
2. Cyprus: Andreas G. Kari
3. ECP/GR: Lorenzo Maggioni
4. Estonia: Hans Küüts & Ülle Tamm (representing Vahur Kukk)
5. FAO (observer): Elcio Guimarães
6. France: Louis Jestin
7. IPGRI/Global Crop Diversity Trust (observer): Brigitte Laliberté
8. Israel: Abraham Korol, Tzion Fahima
9. Netherlands: Noor Bas
10. Russia (observer): Olga Kovaleva, Irina Terentyeva
11. Slovakia: Michaela Benková
12. Yugoslavia: Novo Przulj